

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

Applicant

John M. Hetzel, Jr.

Serial No.

09/689,131

Title:

FIBERGLASS COMPOSITE FIRE FIGHTING HELMET AND

METHOD FOR MAKING A FIBERGLASS COMPOSITE

FIREFIGHTING HELMET

Docket

520219-273

Examiner

S. Staicovici

Art Unit

1732

Assistant Commissioner for Patents Washington, D.C. 20231

DECLARATION UNDER 37 C.F.R. §1.132

- 1, Teresa A. Lawson, do declare and state that:
- 1. I am Helmet Production Manager of Lion Apparel, Inc., the assignee of the above-identified patent application. I have reviewed and am familiar with the above-identified patent application.
- 2. I have served as Helmet Production Manager at Lion Apparel, Inc. for approximately three years, and have a total of 13 years of practical engineering experience. I graduated from ITT Technical Institute in 1994 with a two-year degree in Tool Design.
- 3. In November 2002 Ashland Specialty Chemical Co., at the request of Lion Apparel, Inc., conducted tests upon a helmet formed using the steps recited in the claims of this application, wherein such a helmet includes ceramic particles (termed the "Ceramic Helmet" herein). These tests compared the performance of the Ceramic Helmet to a helmet of similar size, shape, materials and dimensions, but which lacked any ceramic particles (termed the "Control Sample" herein). Attachment A includes a series of tables including the results of such testing.
- 4. Pages 1 and 2 of Attachment A provide test results relating to the tensile strength of the Control Sample (page 1) and the Ceramic Helmet (page 2). As can be seen in pages 1 and 2,

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Attorney Docket No.: 520219-273

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testing shows that the mean maximum tensile strength of the Ceramic Helmet is 15,483 psi, and the mean tensile strength of the Control Sample is 10,477 psi. Thus, the Ceramic Helmet showed a 48% increase in maximum tensile strength over the Control Sample.

- 5. Pages 3 and 4 of Attachment A provide test results relating to the flexural strength of the Control Sample (page 3) and the Ceramic Helmet (page 4). As can be seen at pages 3 and 4, testing shows that the mean flexural strength of the Ceramic Helmet is 28,183 psi, and the mean tensile strength of the Control Sample is 21,158 psi. Thus, the Ceramic Helmet showed a 33% increase in flexural strength over the Control Sample.
- 6 Pages 5-8 of Attachment A provide data relating to a drop dart evaluation for determining impact resistance of the Ceramic Helmet and the Control Sample. The drop dart test involves dropping a dart of predetermined size, shape and weight from various heights to determine at what drop height the dart causes the helmet to fail or rupture. As can be seen at pages 6 and 8 of Attachment A, the mean height from which the dart is dropped and causes failure of the Ceramic Helmet is 9.5 inches, as compared to 9 inches for the Control Sample. Thus, the Ceramic Helmet showed a 6% increase in impact resistance over the Control Sample as measured by the drop dart evaluation method.
- 7. Pages 9 and 10 of Attachment A provide test data relating to the izod impact test. The izod impact test involves swinging an arm of a predetermined size and shape into a test sample with a uniform force. The transmitted force of the impact is then measured. The izod test was carried out on notched sample (i.e. a sample with a notch or cut-out formed therein) as well as an unnotched sample. As can be seen at pages 9 and 10 of Attachment A, testing shows that the mean impact resistance of the notched Ceramic Helmet is 8.15 ft-lbs/in, and the mean impact resistance of the notched Control Sample is 7.9 ft-lbs/in. Thus, the Ceramic Helmet showed a 3% increase in impact resistance over the Control Sample as measured by the izod impact test for a notched sample.
- 8. Pages 9 and 10 of Attachment A shows that the mean impact resistance of the unnotched Ceramic Helmet is 14.25 ft-lbs/in, and the mean impact resistance of the unnotched Control Sample is 14.81 ft-lbs/in. Thus, the Ceramic Helmet showed a 3% decrease in impact

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Declaration

resistance over the Control Sample as measured by the izod impact test for an unnotched sample.

- 9. As shown at page 11 of Attachment A, the percentage of glass and the percentage of ash differed by 1% between the Control Sample and the Ceramic Helmet. However, in my opinion this small change in percentage would have only a minor effect upon the testing results, and in my opinion the presence of the ceramic particles is the main reason for the difference in performance between the Control Sample and the Ceramic Helmet.
- 10. Lion Apparel, Inc., the assignee of the above-identified patent application, markets, manufactures and sells the Ceramic Helmet under the trademark AMERICAN CLASSICTM. Attachment B shows the sales history of the Ceramic Helmet, and also includes sales data for other helmets sold by Lion Apparel, Inc. Lion Apparel currently markets, manufactures and sells five other types of helmets besides the AMERICAN CLASSIC.
- 11. As can be seen at the bottom of page 1 of Attachment B, for the period of December 2001-November 2002, Lion Apparel sold 7,332 Ceramic Helmets, which represented 28% of all helmets sold by Lion Apparel during that period.
- 12. As can be seen at the bottom of page 1 of Attachment B, for the period of December 2002-November 2003, Lion Apparel sold 9,727 Ceramic Helmets, which represented 40% of all helmets sold by Lion Apparel during that period.
- 13. As can be seen at the bottom of page 1 of Attachment B, for the period of December 2003-November 2004, Lion Apparel sold 7,954 Ceramic Helmets, which represented 38% of all helmets sold by Lion Apparel during that period.
- 14. As can be seen at page 1 of Attachment B, for the period of December 2001-November 2004, Lion Apparel has sold 25,013 Ccramic Helmets.
- 15. As can be seen in page 2 of Attachment B, for the period of March 2003-February 2004 Lion Apparel sold 8,535 Ceramic Helmets, and for the period of March 2004-February 2005 Lion Apparel sold 9,641 Ceramic Helmets.
- 16. For the period of March 2003-February 2005 Lion Apparel sold 18,994 of the Ceramic Helmets, making it the most popular helmet sold by Lion Apparel during that time period.

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- 17. The Ceramic Helmet, and other helmets sold by Lion Apparel, are advertised in similar manners and have similar advertising budgets. In fact, all helmets sold by Lion Apparel are typically marketed in print in the same brochures and literature.
- 18. In my opinion the fact that the Ceramic Helmet is formed using the steps recited in the claims of this application, wherein such a helmet includes ceramic particles is a direct cause of the commercial success of the Ceramic Helmet.
- 19. Attachment C is a print out from Lion Apparel's web page www.lionapparel.com, and more particularly www.paulconwayhelmets.bz/Classic.html, featuring the ceramic features of the Ceramic Helmet.

I hereby declare that all statements herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Teresa A. Lawson

Date: (1911) (0 . 2005

368003

TENSILE TEST - È ASTM D-638 (MAT-2202)

ASHLAND SPECIALTY CHEMICAL CO PHYSICAL TESTING LAB INSTRON 4204

Test type:

Tensile

Operator name:

SLH

50989T1 Sample Identification:

Interface Type:

4200

Instron Corporation

Series IX Automated Materials Testing System

8 06.00

Test Date: Wednesday. November 27, 2002

Sample Rate (pts/secs):

Crosshood Speed:

5.0000

0.2000 0.0000

លៃ/៣ខែ

nira/ni

Temperature: 71 F

Humidity (%)- 50

2nd Crosshead Speed: Full Scale Load Range:

10000.000

lbΓ

SAMPLE ID:

FR 998/35 Control

WINLIMS ID:

Sample comments:

	Maximum Tensile Streogth (psi)	Modulus (ksi)	Elongation at Max Load (%)	Stress at Yield (psi)	Elongalion at Yield (%)	Elongation at Break (%)	Width (in)	Thickness (in)
1	10459	1177.2	115		-	- 1.15	0.506	0.105
2	10562	1077.6	1.43			- 1.43	0.505	0.107
3 :	8729	1354.3	0.82		-	- 0.83	0.501	0,120
4	12366	1240.2	1.37			- 1.37	0 501	0.104
5	10272	1176_3	1.01		•	- 1.02	0.503	0.114
Mean	10477	1205.1	1.16	***		1.16	0.503	0.110
S.D.	1291	101.7	0.25			0.25	0.002	0.007

Reviewed By___ Reviewed Date 11/21/62

ASHLAND SPECIALTY CHEMICAL CO PHYSICAL TESTING LAB 4444 INSTRON

FLEX TEST - ENGLISH UNITS ASTM D-790 (MAT-2203)

Test type:

Operator name:

Flex

SILH

Sample Identification: Interface Type:

50989F1 4200

Instron Corporation

Series IX Automated Materials Testing System

8 03 10

Test Date: Wednesday, November 27, 2002

Humidity (%): 50

Temperature: 71 F

Sample Rate (pts/secs): 2.0000 Crosshead Speed:

0.0500 0.0000 in/min

in/min

2nd Crosshead Speed: Full Scale Load Range:

400.00Ö

lbf

SAMPLE ID:

FR 998/35 Control

WINLIMS ID:

Sample comments:

	Flexural Strength	TANGENT MODULUS	Load at Yield	Strain al Yield	Width	(hickness	Span	Toughness
	(psi)	(ডা)	(lbs)	(ir√in)	(in)	(in)	(in)	(psi)
1	22222	10125	97.2	0.027	0.992	0.115	2.000	44.504
2 "	18974	939.1	81.3	0.026	0.989	0.114	2,000	36.197
ذ ر	19155	963.3	81.6	0.025	1.001	0.113	2.000	37.162
- 4	20434	988.4	88.4	0.024	0.999	0.114	2.000	32.085
5	25005	1150.2	79.9	0.027	0.998	0.098	2.000	45.675
Mean	21158	1010.7	85.7	0.026	0.996	0.111	2.000	39.125
S.Ď.	2512	82,7	7.2	100.0	0.005	0.007	0.000	5.784

ASHLAND SPECIALTY CHEMICAL CO PHYSICAL TESTING LAB INSTRON 4204

TENSILE TEST - ENGLISH UNITS ASTM D-638 (MAT-2202)

Test type:

Tensile

Operator name: Sample Identification: SLH

50989T2

Interface Type:

4200

Instron Corporation

Series IX Automated Materials Testing System

8 06 00

Test Date: Wednesday, November 27, 2002

Humidity (%): 50

Temperature: 71 F

Sample Rate (pts/secs): 5.0000

0.2000

io/min in/min

Crossbead Speed: 2nd Crosshead Speed:

0.0000

Full Scale Load Range: 10000 000

IbF

SAMPLE ID:

FR 998/35 Ceramic

WINLIMS ID:

Sample comments:

	Maximum Tensile Strength (psi)	Modulus (ksi)	Elungation at Max Load (%)	Stress et Yield (psi)	Elongation ut Yield (%)	Elongation at Break (%)	Widds	Thickness (in)
1	14676	1321.5	1.34	-	•	1.35	0.508	0 119
2	15093	1445.9	1.33	-	-	1.33	0.507	0.113
3 /	19820	1590.8	1.66	19636	1 62	1.66	0.505	0.098
4'	14999	1354.6	1.33	•	-	1.33	0.501	0.105
5	12826	1332.3	1.13	-		1.13	0.501	0.108
Mean	15483	1409.0	1.36	0	0.00	1.36	0.504	0.109
S.D.	2594	112.8	0.19	0	0.00	0.19	0.003	0.008

ASHLAND SPECIALTY CHEMICAL CO PHYSICAL TESTING LAB 4444 INSTROM

FLEX TEST - ENGLISH UNITS ASTM D-790 (MAT-2203)

Test type:

Flex

Operator name:

SLH 50989F2

Sample Identification: Interface Type:

4200

Instron Corporation

Series IX Automated Materials Testing System

8.03.10

Test Date: Wednesday, November 27, 2002

Humidity (%): 50

Temperature: 71 F

Sample Rate (pts/secs): 2.0000 Crosshead Speed:

0.0500 0.0000

in/min 'n√min

2nd Crosshead Speed: Full Scale Load Range: 400.000

lbf

SAMPLE TO:

FR 998/35 Ceramic

WINLIMS ID.

Sample comments:

		'ANGEN'I' 101)ULUS	Load at Yield	Strain nt Yield	Width	Thickness	Span	Toughness
	(psi)	(ksī)	(lbs)	(in/in)	(in)	(in)	(in)	(psi)
1	28949	1032.4	183.4	0.031	0.998	0.138	2.000	59.650
2	24212	1022.4	128.0	0.025	0,999	0.126	2.000	
ڎڔ	32589	1219.5	149.3	0.028	1.004	0.117	2.000	57.222
. 4	26715	1102.4	125.6	0.028	0.996	0.119	2.000	51.798
55	28448	1095.4	141.0	0.027	0.999	0.122	2.000	49.899
Mean	28183	1094,4	145.5	0.028	0.999	0.124	2,000	52.412
S.D.	3082	78.5	23.3	0.002	0.003	0,008	0.000	6.364

eight #10

O

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ASHLAND SPECIALTY CHEMICAL CO. PHYSICAL TESTING LAB ASTM D-5420-98a

DROP DART EVALUATION AND CALCULATIONS

REQUESTER: AF NUMBER: ANALYST: DATE:

50989 SLH Fowler 11/27/2002

日次次の数

GEOM.

(MAT-2229) TUP DIA.

的名词的数据[1625+:004/in改变数数]3:00+0:01;in.cm+23 **湖湖湖景水湖 | 1625+1004 | International | 1425+1001 | International** 與機能的形式 | 1625年: 004 in Ex 建创始 | 0.84 + 1001 rin 法法法院 SUPPORT RING

SAMPLE ID: FR 998/35 Control

DROP WEIGHT USED FOR THIS TEST (Ibs): INCREMENT OF HEIGHT(dh) TO BE EMPLOYED: NUMBER OF SPECIMENS TO BE TESTED: GEOMETRY USED FOR THIS TEST (A,B,or C):

inches

عّ	W
helght #1	海滨[5海湖
	(inches)

Thickness (inches) . 0.106

0.103 0.122 0.133

4	ŀ	1	+	╀	+	╀	\perp	╀	╀	╀-	1	\perp	+	+
heiaht #9	-27:13.c.													
height#6 height#7 height#8 height#9 he	354112 m													
height #7	Sec. 11 seep													
heigh! #6	#410 men								×					
Use "X" for failure, Use "O" for non-failure height #1 height #2 height #3 height #5	hes) 期到5萬四 高低低高級機能不同的 作物。8点的 医疗物9之中,当410 部外以如此11点的 [2541218]。					×		0		×				
or non-fall height #4	Field Bready		×		0		0				×			
Use "O" for height #3	就和7 2%。	O		0								×		0
Use "X" for failure, Use "O" for non-failure height#1 height #2 height #3 height #4 hei	ALKER SIEM												0	
Use "X" fr helght #1	出版(2)提出													-
	(sət							_						

0.112

0.115

4501-85

0.117

0.115 0.116 0.103 0,106

Ö

\$42001155gm AVERAGE:

0.103 0,122 13 4 5

Q:WLDOCSWATERIAL\DROPDART.XLS REVISION DATE: 5.1-2000

5

To 10 Wall mer **○ ○ ○ ○ ○ ○**

和中海水流

ASHLAND SPECIALTY CHEMICAL CO. PHYSICAL TESTING LAB ASTM D-5420-98a (MAT-2229)

DROP DART ANALYSIS CONTINUED (page 2)

Total non-failures Total failures = Events (N) = Q =

品的的3里的B 的数据33型位 时间2023时间 数据约0%后间 数据引起来的 经相关证明 **数据0服器** Number of non-failures "O" at each height: Number of "EVENTS" at each height; Number of failures "X" at each height;

₩ #3

E/18/2002

Lowest height which an "EVENT" occurs: ho =

Disregard These Two Numbers:

Coded Height (I):

228.600 mm 38.913 mm St Units

RESULTS:

MEAN FAILURE HEIGHT (h) units in inches = STD DEVIATION OF SAMPLE HEIGHT $(s_h) =$ MEAN FAILURE ENERGY (MFE) =

9.000 Inches 1.532 Inches 4,500 in-lbf

English Units

0.508 Joules

Q:WLDOCS\MATERIAL\DROPDART.XLS REVISION DATE: 5-1-2000 ASHLAND SPECIALTY CHEMICAL CO.

PHYSICAL TESTING LAB ASTM D-5420-98a

DROP DART EVALUATION AND CALCULATIONS Fowler 50989 SLT 11/27/2002 REQUESTER: AF NUMBER: ANALYST:

(MAT-2229) TUP DIA.

GEOM.

SUPPORT RING

1625±3004:004(0:05) **经验或效理 [625共004]in** (1255年00] [1125年00]

SAMPLE ID: FR 998/35 Ceramic

INCREMENT OF HEIGHT(dh) TO BE EMPLOYED: GEOMETRY USED FOR THIS TEST (A,B,or C): DROP WEIGHT USED FOR THIS TEST (lbs): NUMBER OF SPECIMENS TO BE TESTED.

sq 0.5 height #1 height #2 height #3 height #4 height #5 neight #6 height #7 height #8 height #9 height #10

Use "X" for fallure. Use "O" for non-fallure

据域形式的的一指成据 B.处约的 Biken J.s. (1845 B.s. 1828 B.s. 1828 B.s. 1828 B.s. 1828 B.s. 1828 B.s. 183 B.s. 183 B.s.

0

O

0

0

0

0

0

0

inches

(inches) Thickness (inches) 0.134 0.132 0.118 0.146 0.128 0.128 0.127

0.112 0.135 0.143 0.132 0.122 <u>5</u>5 14 15 16 AVERAGE

松地0.1282战略

Q:WLDOCSWATERIALWROPDART.XLS REVISION DATE: 5-1-2000

01 9719.0N . q

LION APPAREL

Dec 22 2004 12:16PM

ASHLAND SPECIALTY CHEMICAL CO. PHYSICAL TESTING LAB ASTM D-5420-98a (MAT-2229)

DROP DART ANALYSIS CONTINUED (page 2)

Total failures =

Total non-failures Events (N) = Q =

Coded Helght (I):

Number of non-failures "O" at each height: Number of failures "X" at each helght: Number of "EVENTS" at each height:

8

Lowest height which an "EVENT" occurs; ho = Disregard These Two Numbers:

0.00

H H

Si Unita

RESULTS:

MEAN FAILURE HEIGHT (h) units in inches = STD DEVIATION OF SAMPLE HEIGHT (Sh) = MEAN FAILURE ENERGY (MFE) =

0.536 joules 241.300 mm 24.707 mm

> 0.973 Inches 9.500 Inches

English Units

4,750 In-lbf

Q:WLDOCSWATERIALIDROPDART.XLS REVISION DATE: 5-1-2000

ASHLAND SPECIALTY CHEMICAL CO. PHYSICAL TESTING LAB

IZOD IMPACT ASTM D-256 (MAT-2246)

AF NUMBER: 50989
REQUESTOR: Fowler
DATE: 11/27/2002
ANALYST: SLH
RANGE(in-lbs): 50

READING (ft-lbs) UNNOTCHED 1.49 1.81 1.71 1.50	
READING (ft-lbs) NOTCHED 0.70 0.85 0.87 1.03	
THICKNESS (In) UNNOTCHED 0.115 0.114 0.121 0.119	
THICKNESS (in) NOTCHED 0.101 0.099 0.092 0.114	
ED UNNOTCHED 13.00 15.90 14.15 12.62 18.40	14.81 2.38 790.84 126.82
NOTCHED 6.97 6.53 9.41 9.03 7.54	7.90 1.27 421.52 67.61
<i></i> ለ ፡፡ ላ ፡፡	(ft-lbs / ln) (ft-lbs / in) SI(JIM) SI(JIM)
SAMPLE FR 998/35 Control	MEAN STD. DEV. MEAN STD. DEV.

ASHLAND SPECIALTY CHEMICAL CO. PHYSICAL TESTING LAB

IZOD IMPACT ASTM D-256 (MAT-2246)

AF NUMBER:

50989

REQUESTOR:

Fowler

DATE:

DATE: 11/27/2002

ANALYST:

SLH

RANGE(in-lbs):

50

MEAN (ft-lbs / in)

SI(J/M)

SI(J/M)

STD. DEV. (ft-lbs / in)

MEAN STD. DEV.

8.15

0.56

435.03

29.68

14 25

1.32

760.79

70.66

KANGE(III-IDS):	อบ						
SAMPLE		NOTCHED	UNNOTCHED	THICKNESS (in) NOTCHED	THICKNESS (in)	READING (ft-lbs) NOTCHED	READING (ft-lbs) UNNOTCHED
FR 998/35	1	6.97	13 00	0 101	0.115	0 70	1.49
Control	2	6.53	15.90	0 099	0.114	0 65	1 81
00.00	3	9.41	14.15	0.092	0 121	0.87	1.71
	4	9.03	12,62	0.114	0.119	1.03	1.50
	5	7.54	18 40	0.118	0 098	0.89	1 80
	3	7.04	10 40	0.10	0 000	0.00	1 00
MEAN	(ft-lbs / in)	7.90	14.81			÷	
STD. DEV.	(ft-lbs / in)	1.27	2.38				
MEAN	SI(J/M)	421.52	790 84				
STD. DEV.	SI(J/M)	67.61	126.82				
				THICKNESS	THICKNESS	READING	READING
				(in)	(īn)	(ft-lbs)	(ft-lbs)
SAMPLE		NOTCHED	UNNOTCHED	NOTCHED	UNNOTCHED	NOTCHED	UNNOTCHED
FR 998/35	1	8.26	14.87	0.126	0 112	1 04	1 67
Ceramic	2	7.71	13.86	0.117	0.128	0.90	1.77
	3	7.96	12.60	0.120	0.135	0.96	1 70
	4	7.75	16.13	0 131	0.118	1 01	1.90
f	5	9.06	13.79	0 122	0.120	1 11	1.65
,							

Ashiand Chemical

Research & Development

ANALYTICAL Services & Technology

Request for QA Analysis

★ ₽	equests cannot b	e logged until req	uester and project	t number are com	pleted.*
Date Submi	tted November	26th, 02	Eq.,	AF Number	E OUT NET
Requester/Phone Nun	ber SFowl	er x 3926		Date Registered	
Ashland Division/Loca	tion CPD			Registered By	
Project Nun)		imated Comp. Date Primary Analyst	
Project N			0 U = 21. C	Refer to APP	
Magufacturer/Custo	mer		شقا لــــــــــــــــــــــــــــــــــــ		1
Date Results Needed:	Safe Handlin	g Precautions: (incl	ude MSDS or warnin	gs of known hazardou	s properties)
12-6-02		*			
14. 6 (70-					
		FR 998/35	T T		
Sample ID →	FR 998/35 Control	Ceramic			
List Analyses	VALUE	VALUE	VALUE	VALUE	VALUE
↓ Required ↓	EXPTD DETD	EXPTD DETD	EXPTD DETD	EXPID DETD	EXPID DETD
1. % ash	130.5	131.5	!		1
2. % alass	130.5	131.5			<u> </u>
3. % Filer	10.0	10.0		ļi	
4.		<u> </u>			
5.				<u> </u>	
6.		<u> </u>			
7.					
8.	L				1
9.		l l		-	1
10.		<u> </u>			
Remarks:	\$ a40.∞		<u> </u>	240 <u>En</u> t	
☐ Standard	Urgent C	harges Authori	zed By:		Date:
Analyzed by:	? Custens	Approve	d by: <u> </u>	Date Date	e: 11-27-02
Direct inquiries to (61- Requests may be faxed	4) 790–3278 or (800) i to (614) 790–4294.	545-8779.			Analytical Form #018 Revised 19-Aug-97
	•				Reorder No. 2899

02/07/	2005	11:48 FAA	821 888 01	19	LI	ON APPAREL	i	APR. C	(5/	
**************************************		MANOR THE MARKE	(N04:03-Dec02.14)	Nev0240660147	332			9	(5)	
Nodolited Sil	Potonic	Data	MEA-11-1- MAIN	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11 11 121			<u> </u>	, 67	
COREL	COLOR	Sum of TOT1-12	Sum of TOT13-24	Sum of TOT25-36	1	Modbl4(lathy44)	流产的第二年02年	May Dat	November 1	rotal Ke
		SUR OF TOT ISTE		0		LFH20APD Total	-	ne	DEAN -	
	10 20	- o		Ö		LFH20BPD Total	-		-	
	30 30	-		0		LFH20CPD Total	-	<u> </u>		
	40			Ū		LFH200PD Total				
	50			0		LFH2120A Total	1,139	2,15B	1,746	5,041
,	BD			0		LFH2120B Total	1,333	1,159	1.734	4,226
LFH20APD 1				C		LFH2120D Total	697	586	484	1,787
	10		0			LFH2120E Total	1,458	3.B55	2.124	7,437
	20	1	0			LFHZ1Z0F Total	325		281	1,255
	30	(0			LFH2120G Total	8		126	12 263
	40				_	LFHZ120J Total	137			1,543
	50				_	LFH2120K Total	706		354	12
	60	(_	LFHZ120N Total	12	 	15	15
LFHZ0BPD	Total				_	LFH2120P Total	775		~	1,845
LFH20CPD	10				_	LFH2120S Total	785		36	243
	20		0			LFH2120U Total	83 69			289
	30) 0		-	LFH2122E Total		ļ <u></u>	- 140	
	40		0		_	LFH2122Z Total	50	 		50
	50	I				LFH2123A Total	- 30	 		-
	60		0			LFH2124 Total		-	 	
LFH20CPD						LFHZ124A Total	17	35		<u>52</u>
LFH20DPD							9			15
	20		0 0		- 16	LFH2124E Total	12			42
	30		<u> </u>			LFHZ1245 TOTAL	46		 	46
	40		0 0		5	LFH2126A Total			-	
	50			<u> </u>	5	LFH2126B Total	-		-	<u> </u>
	60 Total				-	LFH2126D Total	-	 -	 	
LFH20DPD		25				LFH2126E Total		-	-	-
LFHZ120A	11		5 (<u>.</u>	LFH2126K Total	1 1	-		1
	12 22	58			<u> </u>	LFH2126S Total	<u> </u>	-		-
	32	13				LFH2127S Total	1.068	-	_	1,066
	42	13				LFH212CS Total	-	1	1	2
	51		В		<u> </u>	LFH3710A Total	2,107	5,496	12,088	19,691
]	52		4 2		<u> </u>	LFH3710B Total	28	3	52	B3
	62		6 13		6	LFH3711A Total	1,762	150	-	1,922
1	B2		0 (<u>öl —</u>	LFH3711B Total	-	-	-	•
LFH2120A		113			6	LFH3712A Total	1.671	845	-	2,518
LFH2120B	12	1			ō	LFH3713A Total	305	i -	<u> </u>	305
15,2,200	21	87			0	LFH37APD Total	-		-	-
1	22	40		130	3	LFH37BPD Total		-	<u> </u>	
l	32	3	1 11:	18	2	LFH3B10A Total	120			306
	41	10	8	<u> </u>	0	LFH3810B Total]3		2	5
İ	42	7	B 11	23	9	LFH3810E Total	31			389
l	51		7 10		8	LFH3B10S Total			5	8
1	52				0	LFH3810T Total	<u> </u>	51	<u> </u>	51
ł	52		7		<u> 2 </u>	LFH3B1CS Total		<u> </u>	-	
	82		0 B		이	LFH3910A Total	1,882			5,341
LFH2120B	Total	133				LFH3910B Total	40			398
LFH2120D	11	21				LFH3910E Total	2.904			9,075
	12	1			ᅃ	LFH3910G Total	102			192
1	21	29				LFH3910J Total	37			294
	22			<u> </u>	입~	LFH3910S Total	5			216
1	31		<u> </u>			LFH3910T Total		<u>. </u>	- 46	78
1	32		3 6		5	LFH3910U Total	21		46	
	42	8			3 _	LFH3916U Total	5		8	70
	52	-			위	LFH3917E Total	10		32	136
	52				위	LFH3B1CS Total	62:			1,913
. 51101555	B2					LFH4120D Total	12			401
LFH2120D		34				LFH4120E Total	263			1,091
LFH2120E	12 22	80				LFH4120F Total	22			689
	32	11				LFH4120K Total	722			756
	42	14			o	LFH4120N Total	-		·	-
	51				0	LFH4120S Total	51			166
1	52		0 B		5	LFH4121E Total	-		-	1
	<u>82</u>				1	LFH412CS Total	3:		578	696
	82			<u> </u>	ᇷ	LFH5100B Total	12:			219
LFH2120E		145				LFH5100H Total		В 2	1 30	
LFH2120F	111		'5 B		8	LFH5100S Total	11	8 20) 11	47
	12				0	LFH510CS Total	J	-		
`	22	16	15 40	7 18		LFHSD1A Total	6			
	32		2 9	7 5	9	LFHSD1C Total	2			
	42		6	Ö	ם	LFHSD1E Total	4			
	52		3		2	LFHSDCA Total		8 6		
1	52	1	2	5	1	Grand Yotal	20,64	5 24,55	7 27,702	73,104
	B2	_	0 6	1	0					
LFH2120F		32	5 66	0 20	n	Classics ONLY	7,95			
LFH2120G	11				0	Percent of Total	38	% 40°	% 28%	347
	12				0					ļ
	22			D	D					
1	32			D	4					
1	41		O	0l	D		1	1	ı	i

Helmet only sales

Tronnot only ourse	Year	Feb05-Mar04	Feb04-Mar03
Descrip	Item8	Unit	Unit
Traditional	LFH2020A	317	253
Traditional	LFH2020B	38	165
Traditional	LFH2020C	22	5
Traditional	LFH20APD	_	-
Traditional	LFH20BPD	_	-
Traditional	LFH20CPD	· _	-
Traditional	LFH20DPD	-	-
Traditional Total		377	423
Classic	LFH2120A	1,820	2,334
Classic	LFH2120B	669	974
Classic	LFH2120D	1,132	525
Classic	LFH2120E	2,585	2,548
Classic	LFH2120F	531	622
Classic	LFH2120G	18	1 ⁻
Classic	LFH2120J	30	177
Classic	LFH2120K	331	398
Classic	LFH2120N	30	-
Classic	LFH2120P	-	-
Classic	LFH2120S	1,163	598
Classic	LFH2120U	73	173
Classic	LFH2122E	50	84
Classic	LFH2122Z	-	-
Classic	LFH2123A	50	-
Classic	LFH2124	-	-
Classic	LFH2124A	-	21
Classic	LFH2124B	17	32
Classic	LFH2124E	5	39
Classic	LFH2124K	13	1
Classic	LFH2124S	54	-
Classic	LFH2126A	1	-
Classic	LFH2126B	-	-
Classic	LFH2126D	-	-
Classic	LFH2126E	1	7
Classic	LFH2126K	1	-
Classic	LFH2126S	-	-
Classic	LFH2127S	1,066	-
Classic	LFH212CS	1	1
Classic Total		9,641	8,535
Lion	LFH3710A	2,387	4,048
Lion	LFH3710B	80	30
Lion	LFH3711A	2,556	1,188
Lion	LFH3711B	-	-
Lion	LFH3712A	2,554	3,655
Lion	LFH3713A	319	82
Lion	LFH37APD	-	-
Lion	LFH37BPD	-	-
Lion Total		7,896	9,003
Modern	LFH3810A	203	271

Grand Total		24,055	26,152			
Rescue Total		528	400			
Rescue	LFHSDCA	142	50			
Rescue	LFHSD1E	50	163	•		•
Rescue	LFHSD1C	28	21	•		
Rescue	LFHSD1A	64	46		•	
Rescue	LFH510CS	6	-			
Rescue	LFH5100S	30	29			
Rescue	LFH5100H	50	21			
Rescue	LFH5100B	158	70			
leritage Total		982	1,898			
-leritage	LFH412CS	91	84			
Heritage	LFH4121E	1	-			
Heritage	LFH4120S	39	82			
Heritage	LFH4120N	-	1			
Heritage	LFH4120K	78	223			
Heritage	LFH4120F	258	251			
Heritage	LFH4120E	245	550			
Heritage	LFH4120D	103	181			
Heritage	LFH4120B	167	526			
Modern Total		4,631	5,893			
Modern	LFH391CS	6	2			
/lodern	LFH3917E	9	7			
Modern	LFH3916U	52	10			
Modern	LFH3910U	7	32			
Modern	LFH3910T	-	-			
Modern	LFH3910S	70	82			
Modern	LFH3910J	9	68			
Modern ·	LFH3910G	115	73			
Modern	LFH3910E	2,681	3,109			
Modern	LFH3910B	53	295			
Modern	LFH3910A	1,384	1,832			
Modern	LFH381CS	-	-			
Modern	LFH3810T	12	51			
Modern	LFH3810S	1	-			
Modern	LFH3810E	26	61			

Mark Control

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